




10031636

Freeform Search

Database:	US Pre-Grant Publication Full-Text Database
	US Patents Full-Text Database
	US OCR Full-Text Database
	EPO Abstracts Database
	JPO Abstracts Database
	Derwent World Patents Index
	IBM Technical Disclosure Bulletins

Term:	L7 and (separat\$3 or isolat\$3)	  
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Display:	<input type="text" value="10"/>	Documents in Display Format:	<input type="text" value="-"/>	Starting with Number	<input type="text" value="31"/>
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Generate: ☐ Hit List ☒ Hit Count ☐ Side by Side ☐ Image

Search

Clear

Interrupt

Search History

DATE: Monday, February 09, 2004 [Printable Copy](#) [Create Case](#)

Set Name Query

side by side

Hit Count Set Name

result set

DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ

<u>L8</u>	L7 and (separat\$3 or isolat\$3)	10	<u>L8</u>
<u>L7</u>	modif\$4 near5 hydroxyl near5 RNA	15	<u>L7</u>
<u>L6</u>	L5 and hydroxyl	37	<u>L6</u>
<u>L5</u>	L4 and (separat\$3 or isolat\$3)	40	<u>L5</u>
<u>L4</u>	11 and ribose ring\$1	41	<u>L4</u>
<u>L3</u>	12 and (separat\$3 or isolat\$3)	1	<u>L3</u>
<u>L2</u>	L1 and hydroxyl	1	<u>L2</u>
<u>L1</u>	modif\$4 near5 RNA	4339	<u>L1</u>

END OF SEARCH HISTORY

10031636

Freeform Search

Database:	US Pre-Grant Publication Full-Text Database				
	US Patents Full-Text Database				
	US OCR Full-Text Database				
	EPO Abstracts Database				
	JPO Abstracts Database				
	Derwent World Patents Index				
	IBM Technical Disclosure Bulletins				
Term:	15 and OH				
Display:	10	Documents in Display Format:	-	Starting with Number	31
Generate: <input type="radio"/> Hit List <input checked="" type="radio"/> Hit Count <input type="radio"/> Side by Side <input type="radio"/> Image					

Search

Clear

Interrupt

Search History

DATE: Monday, February 09, 2004 [Printable Copy](#) [Create Case](#)

Set Name Query

side by side

Hit Count Set Name

result set




DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ

<u>L8</u>	15 and OH	31	<u>L8</u>
<u>L7</u>	L6 and (separat\$3 or isolat\$3)	1	<u>L7</u>
<u>L6</u>	modif\$4 near5 RNA near5 ribose ring\$1	1	<u>L6</u>
<u>L5</u>	L4	40	<u>L5</u>
<u>L4</u>	L3 and (isolat\$3 or separat\$3)	40	<u>L4</u>
<u>L3</u>	L2 and ribose ring\$1	41	<u>L3</u>
<u>L2</u>	modif\$4 near5 RNA	4339	<u>L2</u>
<u>L1</u>	modif\$4 nea5 ribose rings	0	<u>L1</u>

END OF SEARCH HISTORY

Freeform Search

Database:	US Pre-Grant Publication Full-Text Database
	US Patents Full-Text Database
	US OCR Full-Text Database
	EPO Abstracts Database
	JPO Abstracts Database
	Derwent World Patents Index
	IBM Technical Disclosure Bulletins

Term:	L9 and RNA	  
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Generate: ☐ Hit List ☒ Hit Count ☐ Side by Side ☐ Image

Search History

DATE: Monday, February 09, 2004 [Printable Copy](#) [Create Case](#)

Set Name Query
side by side

Hit Count Set Name
result set

DB=USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ

<u>L10</u>	L9 and RNA	10	<u>L10</u>
<u>L9</u>	Goldsborough.in.	149	<u>L9</u>
<u>L8</u>	l5 and OH	31	<u>L8</u>
<u>L7</u>	L6 and (separat\$3 or isolat\$3)	1	<u>L7</u>
<u>L6</u>	modif\$4 near5 RNA near5 ribose ring\$1	1	<u>L6</u>
<u>L5</u>	L4	40	<u>L5</u>
<u>L4</u>	L3 and (isolat\$3 or separat\$3)	40	<u>L4</u>
<u>L3</u>	L2 and ribose ring\$1	41	<u>L3</u>
<u>L2</u>	modif\$4 near5 RNA	4339	<u>L2</u>
<u>L1</u>	modif\$4 nea5 ribose rings	0	<u>L1</u>

END OF SEARCH HISTORY

First Hit

L8: Entry 30 of 31

File: DWPI

Dec 14, 2000

DERWENT-ACC-NO: 2001-061715

DERWENT-WEEK: 200218

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TITLE: Isolation of RNA in samples, by reaction of ribose hydroxy groups to form a derivative with a definite property, and separation based on that property, use for human, animal, or plant cells, or to examine for infective vectors in these

INVENTOR: GOLDSBOROUGH, A S

PATENT-ASSIGNEE: CYCLOPS GENOME SCI LTD (CYCLN)

PRIORITY-DATA: 1999GB-0010158 (April 30, 1999), 1999GB-0010154 (April 30, 1999),
1999GB-0010156 (April 30, 1999), 1999GB-0010157 (April 30, 1999)

Search Selected

Search ALL

Clear

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> <u>WO 200075302 A2</u>	December 14, 2000	E	071	C12N015/10
<input type="checkbox"/> <u>EP 1177281 A2</u>	February 6, 2002	E	000	C12N015/10
<input type="checkbox"/> <u>AU 200047674 A</u>	December 28, 2000		000	C12N015/10

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ
VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT
SD SE SL SZ TZ UG ZW AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL
PT RO SE SI

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 200075302A2	May 2, 2000	2000WO-GB01684	
EP 1177281A2	May 2, 2000	2000EP-0929666	
EP 1177281A2	May 2, 2000	2000WO-GB01684	
EP 1177281A2		WO 200075302	Based on
AU 200047674A	May 2, 2000	2000AU-0047674	
AU 200047674A		WO 200075302	Based on

INT-CL (IPC): C07 H 1/08; C12 N 15/10

RELATED-ACC-NO: 2000-679754;2001-061717 ;2002-122127

ABSTRACTED-PUB-NO: WO 200075302A

BASIC-ABSTRACT:

NOVELTY - Preparing an oligo- or poly- nucleotide RNA from a sample, comprising treating with a reactant which covalently modifies at least some of the ribose 2'-hydroxy groups and also has a definite property, and separating the modified RNA on the basis of that property, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a kit for the preparative isolation of RNA comprising an oligo- or poly-nucleotide from a sample, comprising:

(a) a reaction system for modifying the RNA to form a modified oligo- or poly-nucleotide where at least one of the 2'-OH positions of the ribose ring is substituted; and

(b) a separation system for isolating RNA by separating material containing the substituent from the sample; and

(2) a preparative device for isolating RNA comprising an oligo- or poly-nucleotide from a sample, comprising:

(a) a sample extractor;

(b) a reaction system for modifying RNA in the sample to contain at least one substituent of a 2'-OH of the ribose rings; and

(c) a separation system for isolating RNA.

USE - The method can be used to separate all types of RNA, including mRNA, tRNA, rRNA, from other cellular components, e.g. proteins, carbohydrates, and lipids. The methods can also be used for separation of RNA from DNA, which can pose difficulties in prior art because of structural similarity. The sample input may be from various biological sources, e.g. animals (including humans), plants, viruses and viroids, or may be a synthetic RNA. Notably, detection of RNA viruses, including hepatitis C virus (HCV) and human immunodeficiency virus (HIV), for diagnostic purposes, requires viral genomic RNA to be isolated in an intact and relatively pure form.

ABSTRACTED-PUB-NO: WO 200075302A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/2

DERWENT-CLASS: B04 D16

CPI-CODES: B04-B01B; B04-E01; B04-N04; B11-C08; B12-K04A; D05-H06; D05-H13;

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> s modif#### (10a)RNA(10a)(separat### or isolat###)
 L1 231 MODIF#### (10A) RNA(10A)(SEPARAT### OR ISOLAT###)

=> s l1 and hydroxyl
 L2 1 L1 AND HYDROXYL

=> d l2 bib ab kwic

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 2000:881292 CAPLUS
 DN 134:39163
 TI Isolation of RNA by differential labeling of the ribose moiety with an
 affinity label
 IN Goldsborough, Andrew Simon
 PA Cyclops Genome Sciences Ltd., UK
 SO PCT Int. Appl., 71 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000075302	A2	20001214	WO 2000-GB1684	20000502
	WO 2000075302	A3	20010426		
	W:		AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:		GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	WO 2001094626	A1	20011213	WO 2000-GB1683	20000502
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	RW:		GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	EP 1177281	A2	20020206	EP 2000-929666	20000502
	R:		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO		
	EP 1196631	A1	20020417	EP 2000-929665	20000502
	R:		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO		
	US 2003039985	A1	20030227	US 2001-11495	20011026
PRAI	GB 1999-10154	A	19990430		
	GB 1999-10156	A	19990430		
	GB 1999-10157	A	19990430		
	GB 1999-10158	A	19990430		
	WO 2000-GB1683	W	20000502		
	WO 2000-GB1684	W	20000502		

AB A method of purifying RNA from a mixt. of nucleic acids including DNA that makes use of the difference in the sugar moiety of the nucleic acid backbone is described. A sample is treated with a reactant capable of covalently modifying the 2'-OH position of the ribose rings of the RNA under conditions so that a proportion of the 2'-OH positions of the ribose rings bear a substituent followed by sepn. of RNA from other contaminants on the basis of a property of the substituent. The use of alkyl groups to modify the backbone of the RNA for capture on a hydrophobic surface, such

as a modified agarose, after salting out with ammonium sulfate is demonstrated.

IT Fluoropolymers, uses

Glass, uses

RL: DEV (Device component use); USES (Uses)

(affinity medium for purifn. of backbone-modified RNA
; isolation of RNA by differential labeling of
ribose moiety with affinity label)

IT Alkali metal chlorides

RL: MOA (Modifier or additive use); USES (Uses)

(in salting out of backbone-modified RNA;
isolation of RNA by differential labeling of ribose
moiety with affinity label)

IT Petroleum products

(light oils, non-polar solvent for desorption of of backbone-
modified RNA; isolation of RNA by
differential labeling of ribose moiety with affinity label)

IT Hydroxyl group

(modification in ribose moiety of RNA of; isolation of RNA by
differential labeling of ribose moiety with affinity label)

IT Salting-out

(of backbone-modified RNA; isolation of
RNA by differential labeling of ribose moiety with affinity
label)

IT 7631-86-9, Silica, uses 24937-79-9, Polyvinylidene difluoride
68679-38-9, Ethyl agarose 120037-82-3, Agarose, dodecyl ether

RL: DEV (Device component use); USES (Uses)

(affinity medium for purifn. of backbone-modified RNA
; isolation of RNA by differential labeling of
ribose moiety with affinity label)

IT 98-88-4D, Benzoyl chloride, reaction products with polymer beads

RL: DEV (Device component use); USES (Uses)

(for capture of backbone-modified RNA;
isolation of RNA by differential labeling of ribose
moiety with affinity label)

IT 7487-88-9, Magnesium sulfate, uses 7778-18-9, Calcium sulfate
7783-20-2, Ammonium sulfate, uses

RL: MOA (Modifier or additive use); USES (Uses)

(in salting out of backbone-modified RNA;
isolation of RNA by differential labeling of ribose
moiety with affinity label)

IT 71-43-2, Benzene, uses 108-88-3, Toluene, uses 109-66-0, Pentane, uses
110-54-3, Hexane, uses 110-82-7, Cyclohexane, uses 1330-20-7, Xylene,
uses

RL: MOA (Modifier or additive use); USES (Uses)

(non-polar solvent for desorption of of backbone-modified
RNA; isolation of RNA by differential
labeling of ribose moiety with affinity label)